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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/727,725 | 12/01/2000 | Harry C. Buchanan JR. | VAL-380-B | 4839 |

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ATTN: Andrew R. Basile
YOUNG & BASILE, P.C.
SUITE 624
3001 WEST BIG BEAVER ROAD
TROY, MI 48084-3107

EXAMINER

HANSEN, COLBY M

ART UNIT PAPER NUMBER

3682

DATE MAILED: 03/05/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/727,725

Applicant(s)
Buchanan Jr. et al.

Examiner
Colby Hansen

Art Unit
3682

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Jan 2, 2002
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-47 is/are pending in the application.
- 4a) Of the above, claim(s) 11-17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 18-47 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on Dec 1, 2000 is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- *See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892) 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 19) ☐ Notice of Informal Patent Application (PTO-152)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 20) ☐ Other: _____

Art Unit: 3682

DETAILED ACTION

Election/Restriction

1. Claims 11-17 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim.

Applicant timely traversed the restriction (election) requirement in Paper No. 4.

Regarding applicants' communication dated 7/19/2001, examiner agrees with applicants' assessment that figures 14-16 are actually different views of the same embodiment; as such, figures 14-16 will be referred to as "species CDE" for any future referencing.

Priority

2. If applicant desires priority under 35 U.S.C. 120 based upon a previously filed copending application, specific reference to the earlier filed application must be made in the instant application. This should appear as the first sentence of the specification following the title, preferably as a separate paragraph. The status of nonprovisional parent application(s) (whether patented or abandoned) should also be included. If a parent application has become a patent, the expression "now Patent No. _____" should follow the filing date of the parent application. If a parent application has become abandoned, the expression "now abandoned" should follow the filing date of the parent application.

Art Unit: 3682

Applicant must also submit a substitute declaration claiming benefit under title 35, U.S. Code, 120, to patent application 09/187,311, now U.S. patent 6,192,585.

Drawings

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "lock member" as claimed in claims 5-6 & 31, must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.
4. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "punch" claimed in claim 8, must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 8 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 8, it is unclear what a "punch" structurally constitutes.

Art Unit: 3682

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-9, 18-35, and 37-47, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Nilsson (US Pat. 4,364,282).

Nilsson ('282) discloses in a ball nut (fig. 1) having at least one internal bearing race with a first end and a second end, and a crossover passage (fig. 2) for connecting the first end and the second end to form a continuous recirculation path for a plurality of ball bearings, the improvement comprising:

at least two eyelets, ends of 13, 14, 15, 18, each eyelet having a helix passage for receiving a plurality of ball bearings formed in a flange end and a crossover passage formed in the flange end, the crossover passage in communication with the helix passage for returning the plurality of ball bearings, wherein assembling the two eyelets in flange-to-flange relationship with respect to one another defines at least one raceway having a single recirculation rotational path for receiving the plurality of ball bearings;

the assembled eyelets overmolded to provide a unitary ball nut, as broadly recited;

the eyelets 13, 14, 15, 18 are identical to one another;

Art Unit: 3682

at least one tab 8,9,10,11 formed on the flange end of the eyelet to define the lock member 42;

the plurality of ball bearings 17 inserted within the helix passage and the crossover passage during assembly;

a punch, as broadly recited recesses 18, 19, in the helix passage to direct ball bearings into the crossover;

means for forming an eyelet (as broadly recited inherent);

means for defining a portion of a crossover portion in the flange end (as broadly recited inherent);

means for assembling the two eyelets in flange-to-flange relationship (as broadly recited inherent);

means for over molding the assembled eyelets (as broadly recited inherent);

means for drawing an eyelet (as broadly recited inherent);

means for temporarily holding the two eyelets with respect to one another (as broadly recited inherent);

means for forming at least one tab on the flange (as broadly recited inherent);

means for inserting the ball bearings (as broadly recited inherent);

means for providing a punch in the helix passage (as broadly recited inherent).

With regard to claims involving specific means of production (e.g. coining, injection molding, stamping, etc.), applicant is advised that no patentable weight is granted to such

Art Unit: 3682

limitations because product-by-process claims are not limited to the manipulations of the recited steps, only the structure implied by the steps (MPEP 2113).

9. Claims 1-9, 18-35, and 37-47, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Galonska (US Pat 3,006,212).

Galonska ('212) discloses in a ball nut (fig. 1) having at least one internal bearing race with a first end and a second end, and a crossover passage 36 for connecting the first end and the second end to form a continuous recirculation path for a plurality of ball bearings, the improvement comprising:

at least two eyelets, ends of 22 each eyelet having a helix passage for receiving a plurality of ball bearings formed in a flange end and a crossover passage formed in the flange end, the crossover passage in communication with the helix passage for returning the plurality of ball bearings, wherein assembling the two eyelets in flange-to-flange relationship with respect to one another defines at least one raceway having a single recirculation rotational path for receiving the plurality of ball bearings;

the assembled eyelets overmolded to provide a unitary ball nut, as broadly recited;

the eyelets 22 are identical to one another;

at least one tab 20,22 formed on the flange end of the eyelet to define the lock member;

the plurality of ball bearings 23 inserted within the helix passage and the crossover passage during assembly;

Art Unit: 3682

a punch, as broadly recited recessed area between 35 & 36, in the helix passage to direct ball bearings into the crossover;

means for forming an eyelet (as broadly recited inherent);

means for defining a portion of a crossover portion in the flange end (as broadly recited inherent);

means for assembling the two eyelets in flange-to-flange relationship (as broadly recited inherent);

means for over molding the assembled eyelets (as broadly recited inherent);

means for drawing an eyelet (as broadly recited inherent);

means for temporarily holding the two eyelets with respect to one another (as broadly recited inherent);

means for forming at least one tab on the flange (as broadly recited inherent);

means for inserting the ball bearings (as broadly recited inherent);

means for providing a punch in the helix passage (as broadly recited inherent).

With regard to claims involving specific means of production (e.g. coining, injection molding, stamping, etc.), applicant is advised that no patentable weight is granted to such limitations because product-by-process claims are not limited to the manipulations of the recited steps, only the structure implied by the steps (MPEP 2113).

Art Unit: 3682

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 10 & 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nilsson ('282).

Nilsson ('282) discloses the claimed invention except for the use of a metal hardened to approximately Rc 62. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have constructed the nut assembly of Nilsson ('282) with a metal hardened to Rc 62, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416. In addition, applicants' lack of disclosure of the pertinence of such a material within the specification, further cements Examiner's assertion of obvious design choice.

12. Claims 10 & 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Galonska ('212).

Galonska ('212) discloses the claimed invention except for the use of a metal hardened to approximately Rc 62. It would have been obvious to one having ordinary skill in the art at the

Art Unit: 3682

time the invention was made to have constructed the nut assembly of Nilsson ('282) with a metal hardened to Rc 62, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416. In addition, applicants' lack of disclosure of the pertinence of such a material within the specification, further cements Examiner's assertion of obvious design choice.

FACSIMILE TRANSMISSION

Submission of your response by facsimile transmission is encouraged. Group 3600's facsimile number is (703) 305-3597. Recognizing the fact that reducing cycle time in the processing and examination of patent applications will effectively increase a patent's term, it is to your benefit to submit responses by facsimile transmission whenever permissible. Such submission will place the response directly in our examining group's hands and will eliminate Post Office processing and delivery time as well as the PTO's mail room processing and delivery time. For a complete list of correspondence not permitted by facsimile transmission, see MPEP 502.01. In general, most responses and/or amendments not requiring a fee, as well as those requiring a fee but charging such fee to a deposit account, can be submitted by facsimile transmission. Responses requiring a fee which applicant is paying by check **should not be** submitting by facsimile transmission separately from the check.

Art Unit: 3682

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Typed or printed name of person signing this certificate:

(Signature)

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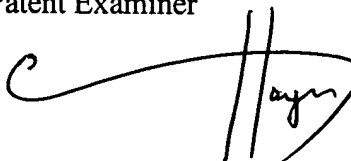
Art Unit: 3682

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Colby Hansen whose telephone number is (703) 305-1036. The examiner can normally be reached on Monday through Thursday and every other Friday from 7:30 PM to 5:00 PM (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bucci, can be reached on (703) 308-3668. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-2168.

Colby M. Hansen
Patent Examiner



2/26/02



DAVID A. BUCCI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600